Safety Policy Division

Sempra RAMP Evaluation Report Workshop

A.21-05-011, A.21-05-014

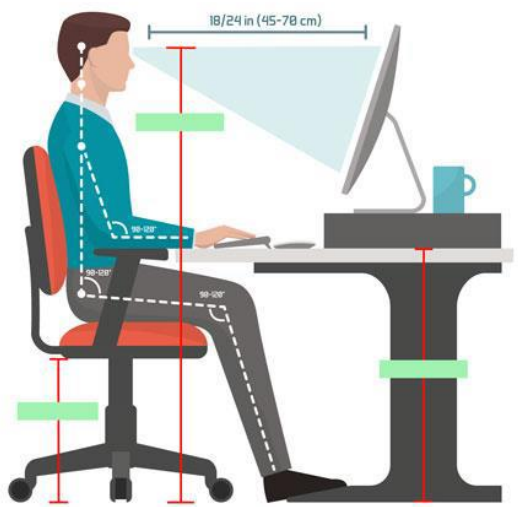
November 22, 2021

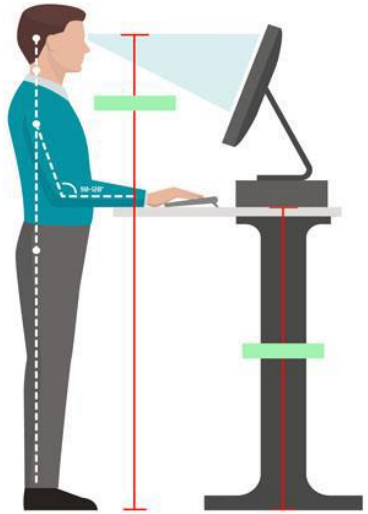
Workshop Logistics and Safety

Online only
- Audio through computer or phone
- Telephone: +1-415-655-0002
- WebEx Meeting Number (access code 2490 954 3289)
- WebEx Meeting Password: 3PJbS37eaJt

- **This workshop is being recorded**

Safety
- Note surroundings and emergency exits
- Ergonomic Check
- COVID-19





Agenda

- 9:30 - 9:40 Introductory Remarks
- 9:40 - 10:00 RAMP-Wide Findings
- 10:00 - 11:00 Risk Chapter Highlights
  Wildfire, Electric Infrastructure, Gas Risks
- 11:00 - 11:10 Break
- 11:10 - 12:00 Q and A
- 12:00 - 1:00 Lunch
- 1:00 - 3:00 Additional Discussion if required

RAMP-Wide Findings

- Positives:
  - RSEs for Controls, new attributes, PSPS as a risk
- Findings:
  - Incorrect Period for Risk Assessment
  - MAVF Weights and Scaling, Implied VSL
  - Lack of Tranche-Specific LoRE and CoRE
  - Insufficient Tranche Granularity
  - Underdeveloped Stakeholder Satisfaction Attribute

Incorrect Period for Risk Assessment

- GRC funding looks forward, needs Post-Test Year RSEs.
- Settlement Agreement refers to "GRC Period Under Review"
  - Logically, that period includes Post-Test Years.

  - CPUC Decision D.14-12-025, *Decision Incorporating a Risk-based Decision-Making Framework into the Rate Case Plan* states as a Finding of Fact: "The logical starting point for prioritizing safety for the investor-owned energy utilities is in the RCP and the GRCs of each of the energy utilities because the GRC is the proceeding in which the utility requests funding for the test year and attrition years, and the Commission adopts and authorizes just and reasonable cost-based rates."

Excessive Implied Value of Statistical Life

- Sempra's choices imply a Value of Statistical Life of $100 million.
  - Safety mitigations are likely overvalued
  - For reference, US DOT current VSL guidance figure is $11.6 million
  - Risk Tolerance should also be considered in setting value
- SPD Staff recommends that Sempra reevaluate the weighting and range factors in their MAVF to produce more defensible valuations of consequences.

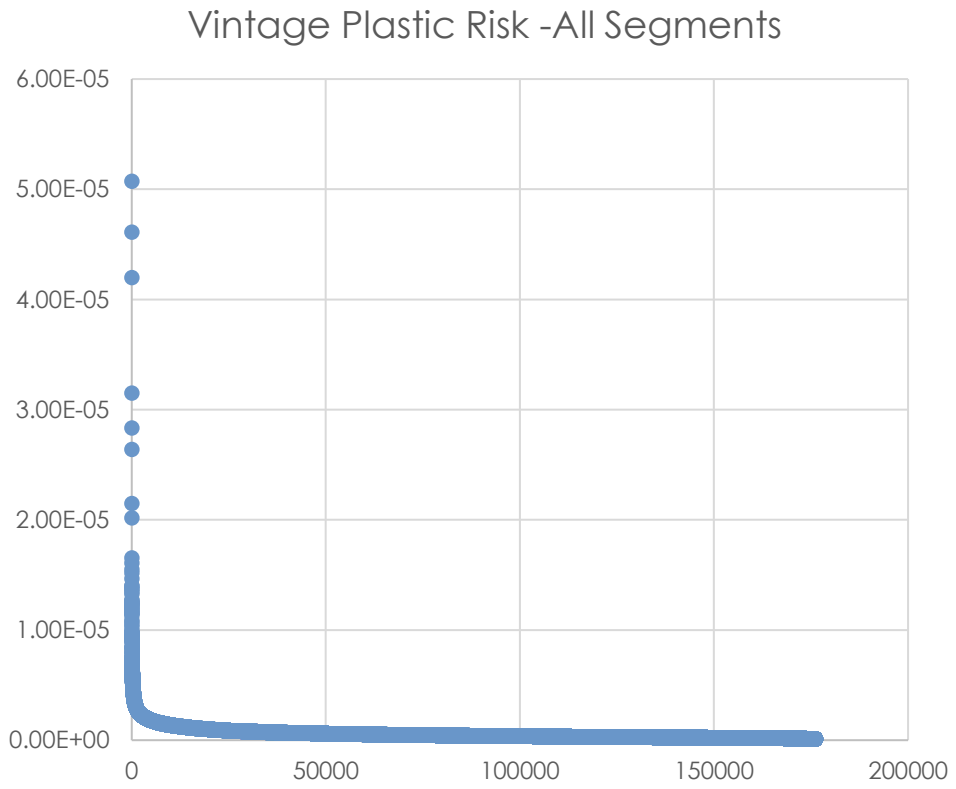
Lack of Tranche-Specific LoRE and CoRE

- Sempra companies did not provide distinct tranche-specific Likelihood of Risk Event (LoRE) and Consequence of Risk Event (CoRE)
- Tranche = subgroup of asset with a distinct risk score
- Tranche LoRE and/or CoRE should vary based on the characteristics of that Tranche from parent asset class
- The risk score should reflect unique characteristics of the tranche to allow for a better understanding of the impact of the proposed mitigations

Insufficient Tranche Granularity

- A given asset will have segments at higher and lower risk
  - Pipeline weld type, corrosion history, inline inspection capability, etc.
  - For Wildfire Risk, the tranching into High Fire Threat District Tier 3 versus Tier 2, is too broad for an accurate reflection of the varying risk consequences faced by assets within the HFTD.
- Granular tranching supports prioritization of mitigations
- SPD Staff Recommends that Sempra review SPD and party comments regarding tranching and respond in the GRC filing.

VIPP Data Analysis



Source: Sempra "DREAMS" data from TURN Data Request #11.

Underdeveloped Stakeholder Satisfaction Attribute

- Sempra introduced a new MAVF attribute, "Stakeholder Satisfaction"
- This is the first time that an IOU has introduced a new attribute
- Explanation of the Stakeholder Satisfaction sub-attributes and the bases for assumptions of SME judgement leave several questions
- SPD is concerned that it is not developed enough to use in the MAVF

Top Risks Identified in Sempra RAMPs

TABLE 1. SDG&E RAMP Risks Ordered by Multi-Attribute Risk Score

RAMP Chapter Number and Subject	Risk Score	LoRE (events/Yr)	CoRE
SDGE-1 Wildfire Risk including PSPS Risk	16,459	NA	NA
SDGE-1 Wildfire (excluding PSPS Risk)	11,768	21.20	556
SDGE-1 Wildfire (PSPS Risk only)	4,691	4.00	1,173
SDGE-2 Electric Infrastructure Integrity	9,177	1,632.00	6
SDGE-3 High Pressure Pipeline Incident	2,029	0.88	2,301
SDGE-4 Contractor Safety Incident	1,894	1.83	1,033
SDGE-5 Customer and Public Electric Contact	1,396	1.17	1,197
SCG-6/SDGE-6 Cybersecurity	1,316	0.08	16,446
SDGE-8 Employee Safety Incident	1,062	0.83	1,275
SDGE-7 Pipeline Dig-In Incident (High Pressure)	815	0.19	4,235
SDGE-9 Medium Pressure Pipeline Incident	606	101.42	6

*N/A = LoRE and CoRE determined separately for Wildfire w/o PSPS, and for PSPS risks.

TABLE 2. SoCalGas RAMP Risks Ordered by Multi-Attribute Risk Score

RAMP Chapter Number and Subject	Risk Score	LoRE (events/Yr)	CoRE
SCG-1 High Pressure Pipeline Incident	4,644	8.64	538
SCG-3 Medium Pressure Pipeline Incident	3,071	544.99	6
SCG-4 Gas Storage Incident	2,721	0.29	9,306
SCG-5 Employee Safety Incident	2,667	533.09	5
SCG-2 Pipeline Dig-In Incident (High Pressure)	2,180	0.70	3,114
SCG-6/SDGE-6 Cybersecurity	975	0.09	10,829
SCG-7 Contractor Safety Incident	469	144.77	3

Wildfire Risk Modeling

Applicable RAMP-wide Findings:

- Lack of Granularity of Tranches
- Apportionment of LoRE and CoRE

Endorsement of MGRA's Recommendation:

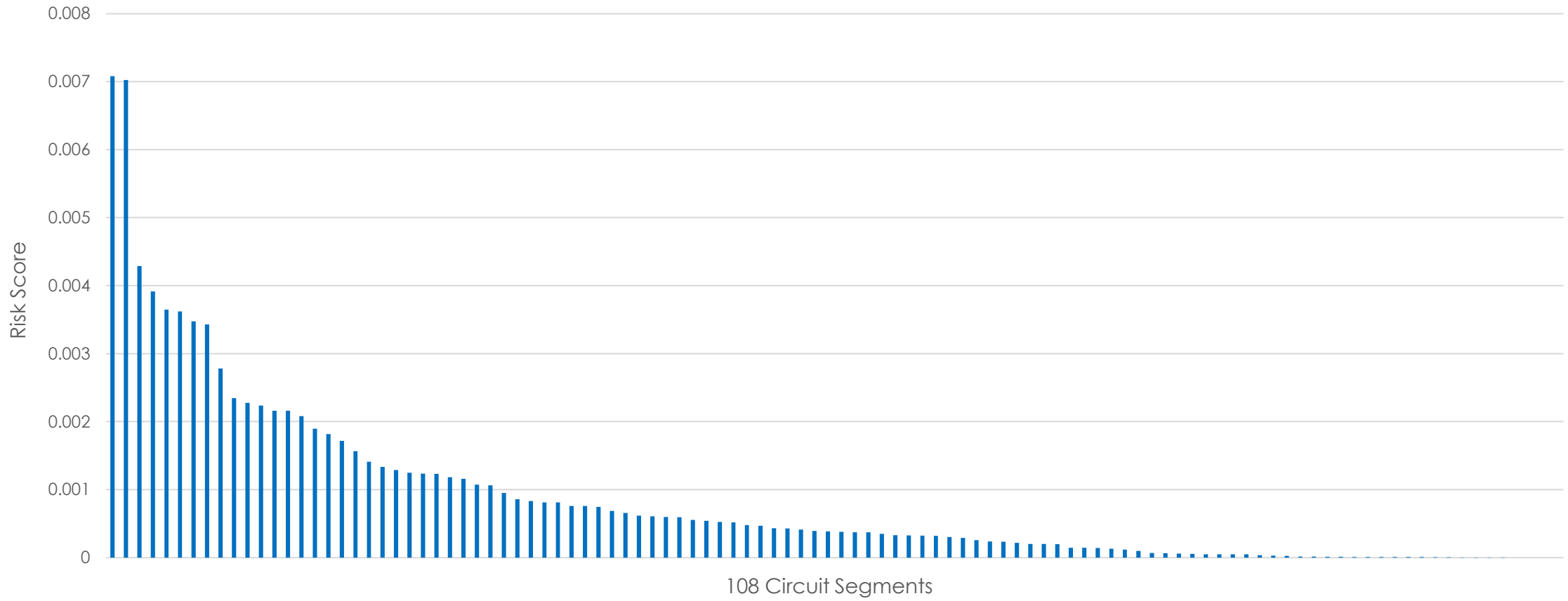
- Consequence Distribution Model
- Smoke Impacts on Health

Wildfire Risk Modeling

Other Recommendations:

- SDG&E should present the units of work in the control and mitigation programs according to circuit miles or circuit segments.
- Provide full risk profile for all 627 overhead circuit segments in the HFTD in its next General Rate Case filing.

Wildfire Risk Profile for Targeted 108 Circuit Segments



Wildfire Risk Modeling

- Provide RSEs and any accompanying explanations for foundational activities.
- Provide supplemental data in next GRC filing that would display programs that are both effective and efficient.
- Evaluate a more realistic alternative(s) than the one found in Alternative 1, for "all undergrounding."
- Consider separating the analysis of risk of PSPS impact from the Wildfire Risk.

Wildfire Risk Modeling

Recommendations for Clarity:

- Present the DTs according to its top concerns and priorities.
- Quantify the exposure of its assets for the Wildfire Risk and the customers exposed to PSPS impact risk.
- Present Wildfire Risk CoRE and risk of PSPS impact CoRE broken down by Tier

Wildfire Risk Modeling

Recommendations for Clarity (continued):

- Written justification or explanation for any application of SME judgment.
- Explain why the Covered Conductor control/mitigation program has an effect on PSPS impact risk reduction in Tier 3 but not in Tier 2.

Electric Infrastructure Risk

- Highest Risk Score after Wildfire (9,177)
  - High number of events (1,632), low CoRE (5.62).
  - Reliability (67%) is dominant attribute vs Safety (6.7%)
- Stakeholder Satisfaction
  - Large component of risk score (23%)
  - SPD uncertain about this attribute
- Lacks Tranche-Specific Scores

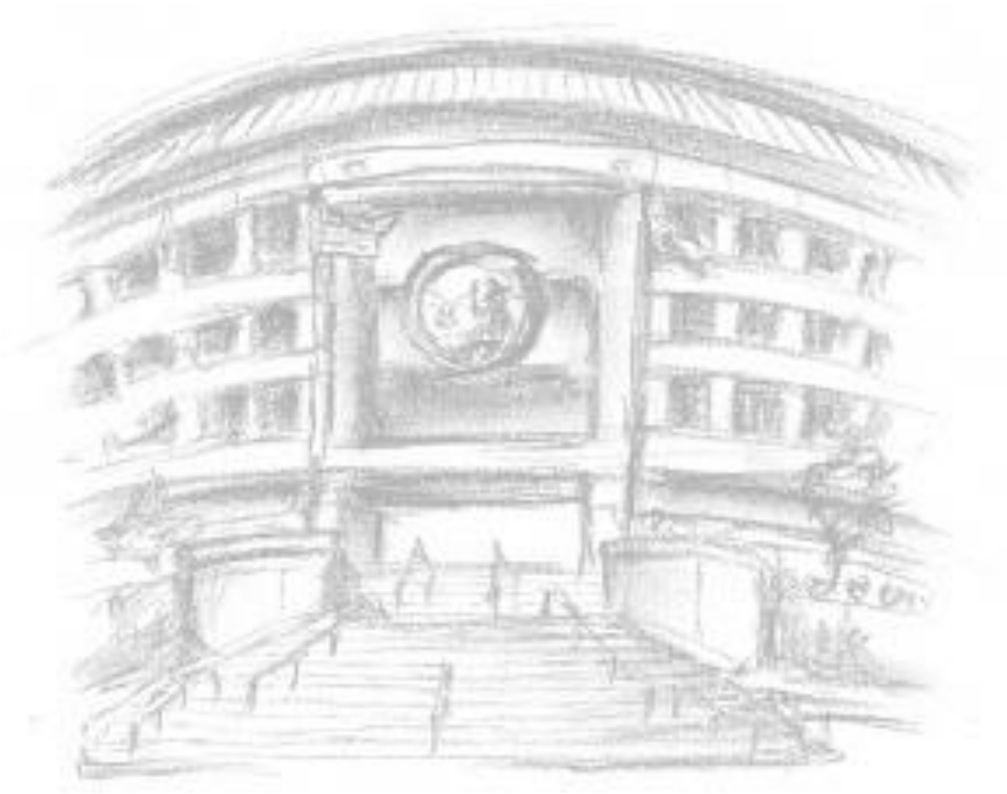
Gas Systems Risks

- High Pressure Pipeline
  - LoRE and CoRE were not specific to each tranche.
    - Example High Consequence Area, non-HCA tranche values.
  - Tranches cover broad sections of pipeline.
    - Risk expected to change within the chosen tranches.
- Medium Pressure
  - VIPP analysis indicates more tranche granularity needed.
- Gas Storage
  - Aliso Canyon-type community impacts missing.
    - Should at least discuss, if not quantified

NEXT STEPS	DATE
Opening Comments on Sempra's RAMP report and SPD's Evaluation Report, filed and served	December 6, 2021
Reply Comments, filed and served	December 15, 2021
Incorporate RAMP feedback into TY 2024 GRC filing	Ongoing through May 2022
SDG&E and SoCalGas file TY2024 GRC	By May 15, 2022
GRC PHC, held	July 2022
Decision closing application and/or integrating into GRC, issued	4th Quarter 2022

Questions?

Thank You



Additional Slides for Reference

Tranche Specific Lore and CoRE from Settlement Agreement

16.	Expressing Effects of a Mitigation	The effects of a mitigation on a Tranche will be expressed as a change to the Tranche-specific pre-mitigation values for LoRE and/or CoRE. The utility will provide the pre- and post-mitigation values for LoRE and CoRE determined in accordance with this Step 3 for all mitigations subject to this Step 3 analysis.
19.	Measurement of Pre-Mitigation Risk Score	The pre-mitigation risk score will be calculated as the product of the pre-mitigation LoRE and the pre-mitigation CoRE for each Tranche subject to the identified Risk Event.
22.	Measurement of Post-Mitigation Risk Score	The post-mitigation risk score will be calculated as the product of the post-mitigation LoRE and post-mitigation CoRE for each Tranche subject to the identified Risk Event.

Effective and Efficient Programs

ID	Control/Mitigation Name	PSPS Impact Mitigation	WF Risk Mitigation	RSE per $Million
C9/M4-T2	PSPS Sectionalizing (HFTD Tier 2)	√		1,063
C30-T1	Distribution System Inspection – CMP – Annual Patrol (HFTD Tier 3)		**√**	684
C30-T2	Distribution System Inspection – CMP – Annual Patrol (HFTD Tier 2)		**√**	373
C24-T2	Distribution System Inspection – IR/Corona (HFTD Tier 2)		**√**	322
C11/M6-T1	Advanced Protection (HFTD Tier 3)		**√**	309
C34-T1	Pole Brushing (HFTD Tier 3)		**√**	261
C28-T1	Distribution System Inspection – Drone Inspections (HFTD Tier 3)		√	194
C31-T1	Tree Trimming (HFTD Tier 3)		**√**	192
C16/M11-T1	Strategic Undergrounding (HFTD Tier 3)	√	**√**	156
C34-T2	Pole Brushing (HFTD Tier 2)		**√**	152
C37-T1	PSPS Events and Mitigation of PSPS Impacts (HFTD Tier 3)		**√**	145
C14/M9-T1	Standby Power Programs (HFTD Tier 3)	√		120
C37-T2	PSPS Events and Mitigation of PSPS Impacts (HFTD Tier 2)		**√**	120
C27-T1	Distribution System Inspection – HFTD Tier 3 Inspections (HFTD Tier 3)		√	111
C31-T2	Tree Trimming (HFTD Tier 2)		√	104